Claim Amendments

Claims 1-8 are cancelled without prejudice.
Claims 9-17 are unchanged.

In a still further aspect, the invention relates to a method for making a pontoon.

In a preferred embodiment, the method includes the steps of providing a sheet of aluminum having a length of at least 14 feet and encircling the sheet about its length axis using a roller having a length of at least 14 feet while simultaneously urging portions of the roller in a desired direction so that the roller is substantially axially linear.

BRIEF DESCRIPTION OF THE DRAWINGS

Further features of preferred embodiments of the invention will become apparent by reference to the detailed description of preferred embodiments when considered in conjunction with the figures, which are not to scale, wherein like reference numbers, indicate like elements through the several views, and wherein,

FIG. 1 is a perspective view of a prior art pontoon of the type having circumferential welds intermediate the ends of a cylindrical section of the pontoon.

FIG. 2 is a perspective view of a pontoon in accordance with a preferred embodiment of the invention.

FIG. 3 is a close-up of a front or bow portion of the pontoon of FIG. 2.

FIG. 4 is a close-up view of the rear end cap of the pontoon of FIG. 2.

FIG. 5 is a top perspective view of the pontoon of FIG. 2.

FIG. 6 is a bottom perspective view of the pontoon of FIG. 2.

With reference to FIGS. 4-7, the pontoon 30 also preferably includes one or more splash fins **46**, a keel **48**, and a plurality of deck uprights **50**. The fins, keel, and uprights are also preferably of aluminum construction and attached as by welding to the exterior of the pontoon 30. With reference to FIG 7, a pair of the pontoons 30 may be secured in a desired orientation as by welding cross bars **52** between adjacent ones of the deck uprights 50. A deck **54**, preferably of marine grade plywood, may be secured to the crossbars 52, as by bolts or other fasteners, to yield a boat, such as pontoon boat **56** shown in FIG. 8

The section 32 of the pontoon 30 preferably has a length in excess of about 14 feet and, most preferably from about 20 to about 25 feet (or longer) with an internal diameter of from about 20 to about 28 inches. For the purpose of example, a pontoon 30 having a cylindrical section 32 with a length of 25 feet and an interior diameter of 25 inches is preferably formed using a sheet S of aluminum (FIG. 11) having a length of about 21 feet, a width of about 6 1/2 feet, and a thickness of about 1/12 inch. The section 32 has a desirable geometry in that is of one-piece construction, does not include any circumferential welds between the ends 36 and 40, and is substantially straight and not bowed or curved along its length. That is, the section 32 is substantially linear along its length axis. As explained in more detail in connection with FIG. 20, a cylinder is not considered to be substantially linear if it exhibits a bow,

is unsuitable for use as a pontoon in that the resulting cylinder would bow or curve and would not be substantially linear along its length axis. For the purpose of comparative example, there is shown the roller 106 having a length of about 25 feet and in use to form the described aluminum sheet, but without use of the anti-deflection system 112. Under such conditions, the roller will generally have a bow or curvature, as represented by distance **d** in FIG. 19, in excess of about 1 inch. Such a roller curvature generally results in a cylinder **300** (FIG. 20) having a length of about 25 feet and a corresponding bow or curvature **b** in excess of about 1 inch, such that the cylinder 300 is not substantially linear along its length axis.

As mentioned previously, the lower roller support system 118 inhibits deflection of the lower rollers 102 and 104, such deflection generally being a downward deflection away from the roller 106. Absent the lower support system 118, the rollers 102 and 104 will each have a bow or curvature of at least about 1 inch when under load. Thus, absent the lower roller support system 118 and the anti-deflection system 112, the rollers 102-106 would each deflect at least about 1 inch and result in a cylinder having a deflection in excess of about 1 inch and generally at least about 3 inches.

The apparatus of the invention thus enables curvature or bending of the rollers to be substantially eliminated when the rollers are under load, thereby permitting